

**In the Claims:**

Please amend the claims as follows:

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- 1    23.    An integrated circuit structure formed at the surface of a substrate,  
 2           comprising:  
 3                a plurality of shallow trenches formed in the surface of the substrate;  
 4                a nitrogen doped insulating liner grown on sidewalls of the shallow  
 5                trenches by treating said sidewalls with an oxygen rich  
 6                atmosphere followed with treating said sidewalls with a nitrogen  
 7                compound;  
 8                a gap filling insulating material filling the shallow trenches level with  
 9                the surface of the substrate said gap filling insulating material  
 10               being high temperature annealed to cause said gap filling  
 11               insulating material to become more dense; and  
 12               a plurality transistors formed in the surface of the substrate in  
 13               regions between said shallow trenches, wherein each of said  
 14               transistors include a source and a drain formed by diffusing an  
 15               impurity species into the surface of said substrate, wherein said  
 16               nitrogen doped insulating liner acts as a stop to prevent said  
 17               impurity species from diffusing into said substrate from said gap  
 18               filling insulating material.

1 24. The integrated circuit structure of claim 23 wherein said nitrogen compound  
2 is selected from the group of nitrogen compounds consisting of nitrogen  
3 ( $N_2$ ) gas, ammonia ( $NH_3$ ), nitric oxide (NO), and nitrous oxide ( $N_2O$ ).

1 25. The integrated circuit structure of claim 23 wherein the oxygen rich  
2 atmosphere is selected from the atmospheres consisting of steam and  
3 oxygen gas.

1 26. The integrated circuit structure of claim 23 wherein the treating of the  
2 sidewalls of the shallow trenches with the oxygen rich atmosphere of the  
3 shallow trenches is at a temperature from approximately  $900^\circ C$  to  
4 approximately  $1000^\circ C$ , at a pressure of from approximately 600 Torr to  
5 approximately 760 Torr, for a period of time from 60 minutes to 120  
6 minutes.

### REMARKS

Examiner Pompey is thanked for the thorough examination of the subject  
10 Patent Application. The Claims have been carefully reviewed and amended, and  
are considered to be in condition for allowance.

Reconsideration of the rejection under 35 USC §103(a) of Claims 23-33 as  
being unpatentable over U.S. Patent 6,218,720 (Gardner et al.) in light of the  
following argument. Claim 23 is amended to claim a nitrogen doped insulating  
15 liner grown on sidewalls of the shallow trenches by treating the sidewalls with an